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EXAMINER

SUAZO, RAINIER A

ART UNIT PAPER NUMBER

2144

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/852,526

Applicant(s)

RIGORI ET AL.

Examiner

Rainier Suazo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-26 are pending in this application.

Response to Arguments

In page 7 of Applicant's remarks, Applicant argues that a prima facie case of obviousness is not established. Applicant point out that the following features are not taught by the cited prior art:

"a resolver responsive to a request from a requestor for a service to determine whether a requested service is provided by the service gateway;

a negotiator responsive to an indication from the resolver that a requested service is not provided by the service gateway to query an external source for identifying a further service for attempting to satisfy the service request."

An Applicant reason for stating that a prima facie case of obviousness is not established is that "Applicant can find no teaching or suggestion of at least the above highlighted features in the cited at - either singly, or in combination". Examiner contends such statements. Details regarding how the above highlighted limitations are taught or suggested by the cited prior art are provided in the following discussion based primarily on Chen et al. (Dynamic-Agents for Dynamic Service Provisioning) hereinafter

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referenced to as Chen and Howard et al. (U.S. Patent Number 6,601,086) hereinafter referenced to as Howard.

The limitation “a resolver responsive to a request from a requestor for a service to determine whether a requested service is provided by the service gateway” was addressed in the first action mailed on 09/21/2004 pages 2 and 3. Examiner further clarifies Chen disclosure as follows. Chen taught a “resolver” in page 4 paragraphs 7 and 8 and provides more details in page 7 paragraph 6. Chen further explains that a dynamic-agent named “coordinator” is used to provide naming service with the distinction that it maintains the agent name registry and, optionally, resource lists. In addition each dynamic-agent also keeps an address-book recording the addresses of those dynamic-agents which have become known to it, and are known to be alive (page 4 paragraph 7). Therefore, in Chen's disclosure, a dynamic-agent that consults its own address-book and then the coordinator in order to obtain dynamic-agents services availability (page 4 paragraphs 7 and 8). Moreover in page 7 paragraph 6, Chen explicitly taught the “a resolver responsive to a request from a requestor for a service to determine whether a requested service is provided by the service gateway” in the form a mechanism to determine if program to be executed exist in its object store by reciting “when a dynamic-agent A receives a request to execute a program that does not exist in its object store and its Url is unknown...”. Chen further describes mechanisms to trigger modification of agent behavior, from page 5 paragraph 14 to page 6 paragraph 1, Chen recites “...when A

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receives a message with a domain-specific content it cannot interpret..." which is commensurate to be "responsive to a request from a requestor". Chen further taught exemplary agents that determine its capabilities by the loaded programs (page 9 paragraph 1) and such agent being embodied in "platforms" (fig. 4) which is commensurate to "to determine whether a requested service is provided by the service gateway". Then, Chen's disclosure describes agent with explicit capabilities to determine their own capabilities (page 9 paragraph 1); and if such agent is embodied in a platform (fig. 4) the agent determines if the service is provided by other agents either by using its own address book or by sending at least one message to a 'coordinator' agent (page 4 paragraph 7), therefore, determining if the service is provided by the platform (service gateway); such messaging functionality being executable "when A needs to send a message to another whose address is unknown" (page 4 paragraph 7 and page 6 paragraph 1). Furthermore, Howard which is part of the combination, at least, suggest the claimed limitation by teaching that embedded devices 24 communicate with a gateway computer 84 by sending messages, such gateway computer 84 having services information 104 (see fig. 8). Howard also teaches that some service is provided to embedded devices 24 in figure 11 and in column 16 lines 20-53, Howard recites, "The service provider 20 may send 144 a transmit message to the embedded device 24 and store 146 device information descriptive of a transaction. Information about the transaction (about the message(s) send or received) may be used for billing purposes. Howard extensively taught the interaction of embedded device

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service provider 20 and a gateway computer 84 with other "external" service providers, see figures 1, 7, 8, 9 and 10.

The limitation "a negotiator **responsive to an indication from the resolver that a requested service is not provided** by the service gateway to **query an external source for identifying a further service for attempting to satisfy the service request.**" Was, at least, suggested by Chen as follows. A negotiator **responsive to an indication from the resolver that a requested service is not provided** by the service gateway is commensurate, for example, with "...**A consults the resource-broker to obtain the program's address and load the program. In many cases the coordinator can be used as a resource-broker as well.**" see Chen page 7 paragraph 7, last 4 lines). Chen's further describes in **page 8 paragraph 3** inter-domain messaging functionality teaching that when A **consults** the resource-broker or coordinator such consulting message will be sent to other agents in a foreign agent-domain under certain circumstances. Therefore, a closer review of Chen's teachings in page 8 paragraph 3 reveal that Chen disclosure, at least, suggest **"to query an external source for identifying a further service for attempting to satisfy the service request"**. As pointed out in previous office action mailed on 09/21/2004 in page 4 paragraph 4, Chen provides no details regarding the act of "querying" in an expressive manner. Nevertheless, in the same page in paragraph 6, it is also pointed out that Chen provides sufficient motivation to explore the art of "searching" classes in a networked environment (page 3 paragraph 13, page 4 paragraphs 3 and 4, page 5

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paragraph 14, page 6 paragraph 1 and page 7 paragraph 1). Moreover, as mentioned above, Chen motivates the exploration of the art of communication with external sources (see page 8 paragraph 3). It was also pointed out in previous office action mailed on 09/21/2004 in page 4 paragraph 5 that Howard expressively described an "information collection manager" for searching the computer network and accessing and obtaining updated service information from the network (abstract, fig. 9, column 3 lines 13-17, column 4 lines 50-58, column 15 lines 38-46 and claim 2).

The above discussion effectively addresses additional arguments found in the remarks in page 7 last paragraph, page 8 paragraphs 1-3 and page 9 paragraph 2 targeting the same above-mentioned limitations.

As per the discussion presented above, Applicant's arguments are found not persuasive.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 9-20, 22, 23, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (Dynamic-Agents for Dynamic Service Provisioning) hereinafter referenced to as Chen in view of Howard et al. (U.S. Patent Number 6,601,086) hereinafter referenced to as Howard.

Regarding claims 1-4, 6, 12, 13, 15, 16-20, 22 and 23, Chen disclosed dynamic agents and dynamic agent infrastructure that supports the dynamic behavior modification of agents wherein every agent can provide and request services. Chen's invention taught a resolver, responsive to a request from a requestor for a service to determine whether a requested service is provided by the service gateway, in the form of a dynamic-agent named (with the symbolic name) coordinator, which provide naming service with the distinction that it maintains the agent name registry and, optionally, resource lists. In addition each dynamic-agent also keeps an address-book recording the addresses of those dynamic-agents, which have become known to it, and are known to be alive. Therefore, in Chen's disclosure, a dynamic-agent or requestor consults its own address-book and then the coordinator in order to obtain dynamic-

agents (services) availability (page 4 paragraphs 7 and 8). Chen's disclosure taught a negotiator, responsive to an indication from the resolver that a requested service is not provided by the service gateway to query an external source for identifying a further service for attempting to satisfy the service request in, the form a dynamic-agent having an agenda object representing a list of sequential, concurrent or conditional tasks to be executed by the same dynamic-agent. However a task may be sent as a request to another agent, and in this way the agenda can involve other agents (page 3 paragraph 13). Chen also disclosed operational situation requiring a dynamic-agent to contact another agent to locate a corresponding message interpreter class and then load it; Chen thought that similarly, when an agent receives a request to execute a problem-solving program that it does not know about, it will ask the requester, coordinator or resource-manager for its Internet address through messaging, and then load the corresponding class, create and instance, and start its execution (page 5 paragraph 14 and page 6 paragraph 1). Chen's invention taught at least one response engine for processing information provided by the external source in response to the negotiator query, in the form of a mechanisms to trigger modification of agent behavior in the case that the operational situation requires a dynamic-agent to changes its behavior. "For example, when A receives a message with domain-specific content it cannot interpret, it will locate, possibly with help of the coordinator or the sender, the corresponding message interpreter class, and then load this class." Therefore Chen's disclosure depicts a dynamic-agent (acting as a negotiator) receiving a message (information) loading the corresponding message interpreter class (response engine) for processing

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information provided by an external source (message sender) in response to the negotiator query (the dynamic-agent first request).

The limitation **"a resolver responsive to a request from a requestor for a service to determine whether a requested service is provided by the service gateway"** was addressed in the first action mailed on 09/21/2004 pages 2 and 3. Examiner further clarifies Chen disclosure as follows. Chen taught a **"resolver"** in page 4 paragraphs 7 and 8 and provides more details in page 7 paragraph 6. Chen further explains that a dynamic-agent named **"coordinator"** is used to provide naming service with the distinction that it maintains the agent name registry and, optionally, resource lists. In addition each dynamic-agent also keeps an address-book recording the addresses of those dynamic-agents **which have become known to it**, and are known to be alive (page 4 paragraph 7). Therefore, in Chen's disclosure, a dynamic-agent that consults its own address-book and then the coordinator in order to obtain dynamic-agents services availability (page 4 paragraphs 7 and 8). **Moreover in page 7 paragraph 6, Chen explicitly taught the** **"a resolver responsive to a request from a requestor for a service to determine whether a requested service is provided by the service gateway" in the form a mechanism to determine if program to be executed exist in its object store by reciting "when a dynamic-agent A receives a request to execute a program that does not exist in its object store and its Url is unknown..."**. Chen further describes mechanisms to trigger modification of agent behavior, from page 5 paragraph 14 to page 6 paragraph 1, Chen recites **"...when A**

receives a message with a domain-specific content it cannot interpret..." which is commensurate to be "responsive to a request from a requestor". Chen further taught exemplary agents that determine its capabilities by the loaded programs (page 9 paragraph 1) and such agent being embodied in "platforms" (fig. 4), which is commensurate to "to determine whether a requested service is provided by the service gateway". Then, Chen's disclosure describes agent with explicit capabilities to determine their own capabilities (page 9 paragraph 1); and if such agent is embodied in a platform (fig. 4) the agent determines if the service is provided by other agents either by using its own address book or by sending at least one message to a 'coordinator' agent (page 4 paragraph 7), therefore, determining if the service is provided by the platform (service gateway); such messaging functionality being executable "when A needs to send a message to another whose address is unknown" (page 4 paragraph 7 and page 6 paragraph 1).

Chen taught the invention substantially as claimed. However, Chen did not expressly teach details regarding "querying" an external. However, Chen, at least suggest communicating with an external source for identifying a further service for attempting to satisfy the service request in page 8 paragraph 3.

Howard, in the same field of endeavor related to service provisioning in networked environments (column 1 lines 10-14) taught a service provider wherein, the service provider communicates with the information providers via the computer network and

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provides data to the plurality of embedded devices such that the embedded devices do not communicate directly with the providers and further comprising an information collection manager for **searching** the computer network and accessing and obtaining updated service information from the computer network (abstract, fig. 9, column 3 lines 8-16, column 4 lines 50-58, column 15 lines 38-46 and claim 2), wherein the provider updates computer program code on an embedded device by obtaining updated computer program code via the computer network and by notifying the embedded device of an available update and by further sending the updated computer program code to the embedded device.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Chen with the teachings of Howard to add the functionality of **querying or searching** (Howard: abstract, fig. 9, column 3 lines 8-16, column 4 lines 50-58, column 15 lines 38-46 and claim 2) external sources for identifying further services to Chen's dynamic agent infrastructure thus expanding the possible amount of services provided. *One of ordinary skill in the art working with Chen at the time of the invention would have been motivate to explore the art of **communicate with an external source for identifying a further service** (Chen: page 8 paragraph 3); and to explore the art of "searching" classes in a networked environment (Chen: page 3 paragraph 13, page 4 paragraphs 3 and 4, page 5 paragraph 14, page 6 paragraph 1 and page 7 paragraph 1); to explore interoperability functionalities of dynamic-agents (page 3 paragraph 13, page 4 paragraphs 3 and 4, page 5 paragraph*

14, page 6 paragraph 1 and page 7 paragraph 1). Howard also taught motivation to obtain updates from external sources to provided additional information that may be useful for the embedded device or the service provider (column 6 pages 18-36). Chen disclosure would have resulted improved with the teachings of Howard by including **specific** teachings to **search or query** (abstract, fig. 9, column 3 lines 8-16, column 4 lines 50-58, column 15 lines 38-46 and claim 2) a network (plurality of computers connectable one to another) representing an external source to Chen's disclosed resource-broker or coordinator or platforms (page 4 paragraph 7, section 4.1, page 8 paragraph 3 and figure 4) after determining that it the requested service can not be satisfied with its own capabilities (read page 9 paragraph 1 and section 4.1).

Regarding claims 5, 9, 11 and 14, Chen further taught a coordinator agent which is used to provide naming service. Chen taught that when a dynamic agent is created, it will first attempt to register its symbolic name and address with the coordinator. Thereafter it can communicate with other dynamic-agents by name (page 4 paragraph 7). Chen also taught interface-like behavior of agents interacting with other agent to solve particular problems (page 3 paragraph 13 and section 4). Therefore, Chen described the dynamic-agents as to be registered with a coordinator, which holds a record of registered agents (services), behaves as interface and is registered as a service itself as an agent (service).

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Regarding claim 12, Chen taught a resource-broker that maintains a directory of registered programs and agendas wherein such functionality can be provided by the coordinator. Chen effectively depicted elements comprising the service provisioning mechanism within a framework having such elements registered therein (section 4.1).

Regarding claims 16 and 18, Chen taught the invention substantially as claimed. However, Chen did not expressly teach details regarding of the gateway system including at least one interface for connection to an external network and at least one interface for connection to a local network to which a plurality of devices are connectable.

Howard taught hardware components utilized in an embedded device network and embodiments therein depicting a "host computer 84 or gateway computer 84 networked together with one or more embedded devices 24". Therefore describing a configuration wherein a host computer actuate together with a gateway computer and communicates with a plurality of embedded devices and which by definition is the entrance point to a different network (**Figure 7, column 9 lines 55-67 and column 10 lines 1-52**).

It would have been obvious to one of ordinary skill in the art working with Chen at the time of the invention was made to combine Chen with the teachings of Howard in order to reach different networks (**Figure 7, column 9 lines 55-67 and column 10 lines 1-52**) and benefit from the extendibility it would provide. Chen motivates the

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exploration of the art of network communications in different ways including: a) the mobility feature of the Dynamic-Agent Architecture that taught how an agent or an agent-factory can launch or cloned at a local or remote site (**page 4 paragraph 4**), b) the Resource-Broker implementation of a dynamic-agent which in many cases can be a coordinator registering socket addresses resolvable to TCP/IP addresses which is a protocol commonly used in the art to connect wide area networks; the resource-broker also maps each program to its address, e.g. URL (Universal Resource Locator) which is also commonly used in the art to describe an address resolvable to a TCP/IP address (**page 7 paragraph 6**), c) an exemplary explanation of **Extended Dynamic Service Provisioning** with a product-manager dynamic-agent communicating with the Web Server, this communication typically use TCP/IP (section 5). Therefore, the combination teaches the gateway system including at least one interface for connection to an external network and at least one interface for connection to a local network to which a plurality of devices are connectable (**Howard: Figure 7, column 9 lines 55-67 and column 10 lines 1-52**).

Regarding Claims 10 and 26, Chen further taught a dynamic-agent communicating with a Web Server which is know in the art to provide HTTP documents using TCP/IP, therefore describing an agent communicating using a predetermined protocol.

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Regarding claim 24, Chen further taught steps for responding a response from an external source under predetermined or dynamic conditions (page 5 paragraph 2, page 3 paragraph 13).

3. Claims 7, 8, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (Dynamic-Agents for Dynamic Service Provisioning) hereinafter referenced to as Chen in view of Howard et al. (U.S. Patent Number 6,601,0861) hereinafter referenced to as Howard and further in view of Hofmann et al. (U.S. Patent Application Publication Number US 2001/0039540 A1) hereinafter referenced to as Hofmann.

Chen in view of Howard did not expressively teach the details of attempting to select a response engine for processing information or interrogating the header of a response received from an external source to attempt to identify a message protocol for the response and select a response agent suitable for managing the communication with the external source.

Hofmann taught a filter server receiving a request for data and retrieving rules to process such request and data (Abstract, page 5 paragraphs 4-8 and figure 3). Hofmann taught in one of the embodiments that the conversion service 125 sets up a protocol reader 350 in create reader operation 420 to determine the source data format. Conversion service 125 passes the source data identifier, or at least a part of the source data identifier to protocol reader 350 (fig. 3). Protocol reader 350 retrieves the format of

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the source data. Some protocols like HTTP provide a MIME type directly and so protocol reader 350 simply retrieves the MIME type. For other protocols, format detection components, which read header information from the source data file itself, are needed in protocol reader 350. Conversion service 125 receives the format of the source data corresponding to the source data identifier from protocol reader 350. In another embodiment, the source data format is an input to conversion service 125. Upon determining the source data format, in create reader operation 420, processing passes to an optional create writer operation 420, in one embodiment. At this point, conversion service 125 knows the target data format. As explained more completely below, conversion service 125 can transmit the converted data to an importer in a number of ways. The output data stream from the last partial filter adapter is presented via an event-based API. Typically, a byte stream printer is needed to convert the data presented via the event-based API to a byte stream that can be processed by other than an event-based API. Also, a protocol writer may be needed. Thus, create writer operation 403 creates a byte stream printer and/or protocol writer, if these components are needed to complete the filter for the data conversion. If neither of these components is needed, operation 420 transfers processing directly to operation 440 and otherwise operation 430 transfers processing directly to operation 440. Conversion service 125 calls a chain factory 315 with at least the source data format and the target data format in create filter chain operation 440. Chain factory 315 calls filter registry service 325 and provides the source and target formats to service 325. Filter registry service 325 using filter registry 127 finds a chain of partial filter adapters, which is suitable for the

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conversion of data from the source data format to the target data format, e.g., from a first data format to a second data format. In another embodiment, service 325 finds a chain of filters to transcode the data, or alternatively to render the data in a different way (Abstract, page 5 paragraphs 4-8 and figure 3).

It would have been obvious to one of ordinary skill in the art working with Chen at the time of the invention was made to modify Chen in view of Howard with the teachings of Hofmann, in order to interact with other nodes or agent; motivated by Chen to explore interoperability features with other programs (Chen: page 3 paragraph 13, page 4 paragraphs 3 and 4 and page 7 paragraph 1). The new combination would have improved Chen previously combined with Howard by providing further functionality of interpreting multiple formats (protocols) in messages and to use protocol reader known in the art to further interpret with a suitable (configured to process) chain of partial filter adapters (Hofmann: page 5 paragraph 8) or to locate a Chen's corresponding (configured to process) message interpreter class and then load it (Chen, page 6 paragraph 1).

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (Dynamic-Agents for Dynamic Service Provisioning) hereinafter referenced to as Chen in view of Howard et al. (U.S. Patent Number 6,601,0861) hereinafter referenced to as Howard and further in view of Jacobson et al. (U.S. Patent Application Number US 5,440,744) hereinafter referenced to as Jacobson.

Chen taught the invention substantially as claimed. However, Chen did not expressly teach details regarding a conditional loop.

Jacobson taught a conditional loop with steps to be performed until certain condition is met which is a technique well known in the art (column 28 lines 28-52).

Chen taught that the execution of dynamic-agents agendas including conditional tasks which motivates the exploration of the art using such sort of programming techniques (page 3 paragraph 13).

It would have been obvious to one of ordinary skill in the art working with Chen at the time of the invention was made to combine Chen in view of Howard with the teachings of Jacobson to create conditional execution that represent conditional loops to automate repeated conditional execution of steps. Motivated by Chen to explore the art of conditional execution (page 3 paragraph 13) and motivate by Howard to explore the art of looping in network communication data processing (fig. 12). Chen combined with Howard would have resulted improved in terms of clarity to include specific teachings regarding conditional repetitive execution (Jacobson: column 28 lines 28-52).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rainier Suazo whose telephone number is (571) 272-3931. The examiner can normally be reached on Monday through Friday, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on (571) 272-3925. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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